

SUCCESSFUL MANAGEMENT OF CORNEAL OPACITY IN ASIAN ELEPHANTS (*ELEPHAS MAXIMUS*)

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ABSTRACT

Five Asian elephants were presented with corneal opacity and impaired vision. Elephants were treated with Ciplox-D eye drops locally and Vitamin-A parentally. All elephants recovered uneventfully.

KEYWORDS: Asian elephant, Corneal opacity, Vitamin-A

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INTRODUCTION

Corneal opacities are eye problems that can lead to scarring or clouding of the cornea, which can cause minor irritation to vision problems and even blindness. Injury, infection and certain eye diseases can cause corneal opacity. However, trauma and vitamin A deficiency are considered the main causes of corneal opacity in elephants, India (Chandrasekharan *et al.*, 1995). Symptoms of corneal opacity depends on cause, symptoms of corneal damage; which includes redness and swelling of the eye tissues and eyelid, tearing, blurred vision, irritation, sensitivity to light, eye discharge and the cornea is milky or cloudy or “ground glass” appearance on cornea (Carola *et al.*, 1990). The incidence of corneal opacity was 5-6% among captive Asian elephants (Ajitkumar *et al.*, 2010).

CASE HISTORY AND CLINICAL FINDINGS

A total of five Asian elephants (*Elephas maximus*) of age between 30 to 50 years were presented during the period of June to November, 2016 with the history of corneal cloudiness with impaired vision. The health of the animals was poor on clinical examination. On asking, mahouts reported no animals were supplied with any feed supplements like mineral mixture and vitamin during last few years. On observation, no ulcer was detected on cornea in all affected elephants.

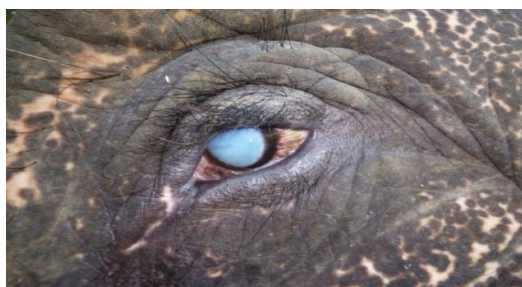


Figure 1: Corneal Opacity in Asian elephant

TREATMENT AND DISCUSSIONS

In the present study, two elephants had corneal opacity on left eye and three elephants had on right eye (Figure 1). This finding was in accordance with the finding of Ajitkumar *et al.*, (2010) in captive Asian elephants of Kerala, India. All the elephants were treated for corneal opacity and it included washing the eye with normal saline (NS) solution daily. The affected eyes of elephants were installed with Ciplox-D (Ciprofloxacin and Dexamethasone) eye drops thrice daily (every 8 hours interval) for suppression of inflammation and secondary bacterial infections. To reduce the corneal inflammation ciprofloxacin was generally recommended to be used with an anti-inflammatory agent such as a corticosteroid (Engel *et al.*, 1995). Concurrently, all the elephants were also injected with Vitamin-A intramuscularly weekly, as vitamin A deficiency was one of the primary causes of corneal opacity among Asian elephants (Chandrasekharan *et al.*, 1995). Corneal opacity might lead to temporary to permanent blindness if not treated promptly. Edema results from local corneal inflammation or impaired corneal endothelia that could no longer remove fluids from the cornea. With reduction in corneal transparency, vision could be gradually impaired; with total corneal opacification, vision could be lost temporarily or permanently (Gelatt and Gelatt, 2011). All the elephants recovered smoothly and uneventfully. This study reported successful treatment of corneal opacity in Asian elephants.

CONCLUSIONS

Corneal opacity may result in temporary to permanent eye damage; therefore it needs immediate attention in terms of diagnosis and treatment. Moreover, differentiation of corneal opacity is most essential from other eye diseases to correct this problem with proper remedy. The present study reports successful management of corneal opacity in Asian elephants with Ciplox-D and Vitamin-A treatment.

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